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TITLE : ZIRCONIA SINTERED BODY EXCELLENT IN DURABILITY AND MANUFACTURING METHOD THEREOF

ABSTRACT : PROBLEM TO BE SOLVED: To provide a durable zirconia sintered body not only excellent in thermal stability and mechanical property at 200-300°C but exhibiting excellent wear resistance and durability and stably through a long term even in warm water at about  $\geq 60^{\circ}\text{C}$  or a high humidity atmosphere and the manufacturing method.

SOLUTION: The zirconia sintered body excellent in durability is a  $\text{ZrO}_2\text{-Y}_2\text{O}_3$  based zirconia sintered body (a) having the crystal phase of  $\text{ZrO}_2$  composed mainly of tetragonal zirconia and (b) the molar ratio  $\text{Y}_2\text{O}_3/\text{ZrO}_2$  of 1.5/98.5-2.3/97.7, (c) containing 0.01-3.0 wt.%  $\text{Al}_2\text{O}_3$  and  $\leq 0.3$  wt.%  $\text{SiO}_2$  and (d) having  $\leq 0.3 \mu\text{m}$  average crystal grain diameter,  $\leq 5\%$  porosity and  $\leq 10$  vol.% transformation quantity by rupture.

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